HYDROTREATING OF COMPONENTS FOR REFINERY BLENDING OF TRANSPORTATION FUELS

ABSTRACT OF THE INVENTION

Economical processes are disclosed for the production of components for refinery blending of transportation fuels by selective hydrogenation of sulfur-containing and/or nitrogen-containing organic compounds contained in mixtures of hydrocarbons which are liquid at ambient conditions. Integrated hydrotreating processes of this invention advantageously provide their own source of high-boiling hydrogenation feedstock derived, for example, by fractionation of hydrotreated petroleum distillates. The high-boiling hydrogenation feedstock consisting essentially of material boiling between about 200° C. and about 425° C. and having a sulfur content up to about 2,500 ppm, is contacted with a gaseous source of dihydrogen at hydrogenation conditions in the presence of a hydrogenation catalyst which exhibits a capability to enhance the incorporation of hydrogen into one or more of the sulfur-containing and/or nitrogen-containing organic compounds and under conditions suitable for hydrogenation of one or more of the sulfur-containing organic compounds, thereby producing a product comprising a mixture of hydrocarbons and other organic compounds and having a sulfur content less than about 35 ppm of sulfur. Advantageously, all or a portion of the product is blended with a low-boiling fraction of a hydrotreated distillate to produce a distillate fuel having a sulfur content of less than 15 ppm.